

WE CLAIM:

1. A spinneret design for producing a crimped homofilament fiber comprising:

a) an extruder for forcing a liquid polymer through a spinneret capillary;

b) the capillary having one of a substantially circular or elliptical cross sectional shape with a cut out of less than 25 percent of a surface area of the cross sectional shape; and

c) the cut out area being contiguous with an outer boundary of the cross sectional shape and forming at least one point on an outer surface of the fiber.

2. The spinneret design of Claim 1 wherein the capillary has a length to width ratio of between about 6:1 to about 10:1.

3. The spinneret design of Claim 1 wherein the capillary is connected to a polymer supply passage by a counterbore.



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4. A nonwoven web comprising:

a plurality of crimped fibers,

each fiber having one of a substantially circular or elliptical cross sectional shape with a cut out of less than 25 percent of a surface area of the cross sectional shape; and

the cut out area being contiguous with the outer boundary of the cross sectional shape and forming at least one point on an outer surface of the fiber.

5. The nonwoven web of Claim 4 wherein the fibers are polypropylene.

6. A process for making crimped fibers, comprising the step of:

extruding each of the fibers through a capillary having one of a substantially circular or elliptical cross sectional shape with a cut out of less than 25 percent of a surface area of the cross sectional shape; and

the cut out area being contiguous with the outer boundary of the cross sectional shape and forming at least one point on an outer surface of the fiber.

7. The process for making crimped fibers according to Claim 6, further comprising the step of: directing quenching fluid primarily at the cutout area of the fiber.



8. The process for making crimped fibers according to Claim 7, further comprising the step of: drawing the fibers while in their plastic state to produce fibers with a substantially round cross section.

9. The process for making crimped fibers according to Claim 6, further comprising the step of: drawing the fibers while in their plastic state to produce fibers with a substantially round cross section.

10. The process for making crimped fibers of Claim 6 wherein the fibers are polypropylene.

11. The process for making crimped fibers of Claim 8 wherein the fibers are polypropylene.

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